HYDRAULIC CRAWLER CRANE

SL6000

Max. Lifting Capacity: 550 ton

STANDARD
Max. Boom Length: 108 m
Max. Luffing Jib Combination: 60 + 72 m

HEAVY LIFT
Max. Boom Length: 108 m
Max. Luffing Jib Combination: 66 + 72 m

SUPER HEAVY LIFT
Max. Boom Length: 126 m
Max. Luffing Jib Combination: 84 + 84 m
The KOBELCO SL6000 crawler crane, with a lifting capacity of up to 550 tons, targets large-scale energy-related projects and large infrastructure installations. In addition to its superb lifting capacity, the SL6000's ‘innovative unit assembly system’ is designed to comply with transport regulations worldwide and to minimize labor required for assembly/disassembly. The SL6000's wide range of attractive features includes advanced safety devices, a wide, comfortable cab giving excellent visibility and other enhancements. KOBELCO is proud to premiere this much-awaited new model, which will further enhance our global reputation for tough, reliable, and outstanding performance.

Innovative Upper Frame Design
Giving high rigidity with optimum transport weight.

Mast-Mounted Boom Hoist Winch
Greater convenience for assembly/disassembly and transportation.
Boom-Mounted Hoist Winches
Greater convenience for assembly/disassembly and transportation.

High-Strength Lattice Boom
Large-diameter main pipe provides greater lifting capacity.

New Crawler Frame
The crawler frame’s lower rollers are positioned inside to maintain frame strength.

The following abbreviations are used throughout this catalog:
STD: Standard  HL: Heavy Lift  SHL: Super Heavy Lift
New, Highly Rigid Upper Frame

The upper frame has been newly designed to increase sectional strength and optimize the frame’s stress capacity. This enhances rigidity while reducing weight, which contributes greatly to the SL6000’s exceptional lifting capacity.

Adjustable HL Mast

With the adjustable HL mast, the rear swing radius can be set to one of three options to suit work site conditions. This guarantees optimized lifting performance even on small sites.

High Lifting Performance

A Crane That Lifts More

High structural strength and reduced weight give the SL6000 superb lifting capacity that can accomplish jobs that are usually done with a one-class bigger machine. In fact, the SL6000 can take on heavy lifting projects using HL (HEAVY LIFT) specifications instead of the SHL (SUPER HEAVY LIFT) specifications that would be needed with conventional models. Because SHL counterweights are not required, the SL6000 has better onsite maneuverability, leading to greater efficiency on small work sites, as well as easier transportation.

Increase in lifting capacity over conventional SSHL spec. and Standard spec.

MAX. LIFTING CA

High-Strength Lattice Boom

Highly rigid, large-diameter main pipe increases boom strength while significantly boosting lifting capacity.
Double Travel Motors

Double motors deliver powerful, steady traction for smooth onsite travel.

High-Output Engine

The engine has an impressive rated output of 320 kW and complies with NRMM (Europe) Stage IIIA and US EPA Tier III exhaust emissions regulations. All of this power works with KOBELCO’s unique Engine Speed Sensing (ESS) control system and new hydraulic systems to ensure stable and smooth simultaneous operations.

Engine Output:

320 kW
Meets NRMM (Europe) Stage IIIA

High-Speed Lifting Increases Work Efficiency

The hoist winches deliver a fast maximum hoisting and lowering speed of 110 m/min that improves operational efficiency on high-rise jobs.

Max. Line Speed (First Layer):

110 m/min

Wide, Large-Capacity Winches for Smooth High-Rise Work

The wide hoist winches provide an impressive spooling capacity of 1,080 m with a 28 mm hoist rope. Their large capacity and large diameter help to prevent uneven spooling and wear while ensuring smooth operation when using a long boom for high-rise work.

Spooling Capacity:

1,080 m

Winches with a Powerful Line Pull Handle Hard Work with Ease

Through the efficient combination of a high-output engine and high-performance hydraulic motors, the winches deliver plenty of line pull for single-line work. There’s also ample capacity for heavy loads when they first clear the ground, and other tough jobs.

Rated Line Pull (Single Line):

137 kN (14.0 tf)
To increase actual working hours

**Excellent Transportability**

Through wide-ranging expertise and innovative technologies, KOBELECO has designed the SL6000 to comply with various transport regulations throughout the world. The layout has been completely reviewed, and a variety of new mechanisms introduced to reduce transport weight. The innovative unit assembly system simplifies assembly/disassembly and transportation to minimize labor and other costs.

---

**New Design Upper Frame**

The upper frame is lighter in weight due to the new structural design combined with the use of high-grade high tensile steel plate. This contributes to improved ease of transport and assembly.

---

**New Crawler Frame**

The crawler frame has the lower rollers fitted inside to increase sectional strength, while the use of high-grade, high tensile-strength steel plate reduces weight.

---

**Easy-to-Transport Swing Cab**

The swing cab is practically designed for easy transportation. By swinging and stowing the cab at the front of the base machine, the transport width of the upper machine is just 3 m.

---

**Winches Mounted on Mast and Boom**

On a conventional model the winches are mounted on the base machine, but on the SL6000 the boom hoist winch is mounted on the mast, and the hoist winches are mounted on the boom base. This not only reduces the weight of the base machine, but also shortens assembly/disassembly times and saves on transportation costs because the boom and mast can be transported with winches attached.

---

**Attachment Transport Streamlined in Four Big Ways**

1. **Boom Width: 3.0 m**
   - Boom width easily meets 3.0 m transportation requirements.

2. **Symmetrical, Thin Counterweights**
   - Symmetrical, thin counterweights ensure a low transport height when loaded on a trailer with the boom. Also, the counterweights can be assembled in any order, making transport planning easier.

3. **Nested Booms Improve Transport Efficiency**
   - The luffing insert jib can be easily nested in the insert boom by using the optional stowing guide rollers. This reduces the number of trailers needed for transport and helps to minimize required storage space.

4. **Boom Connector Pin Holder**
   - The boom connector pin holder prevents the loss of boom connector pins during assembly/disassembly and transportation.
To ensure safe assembly

Assembly and Disassembly

Choice of Methods for Assembly/Disassembly of Luffing Jib

Jib assembly is possible using either the extended or inside holding methods. On sites where construction has not yet started and space is available the extended method is faster, but in a limited space the inside holding method, in which the jib is folded under the boom, can be used for assembly/disassembly.

Inside Holding Method

Extended Method

Self-Erection System

Use the built-in, remote controlled trans-lifter (jack system) to lift the SL6000 clear of the trailer, then drive the trailer away. The self-assembly cylinder installed on the mast is used to install the crawler side frames and/or the boom.

For greater work efficiency

Smooth Operation and Control

Selectable Swing Modes to Match the Job at Hand

Free Swing Mode (High/Low):
This mode is designed for material handling and other cycle-duty operations that require consecutive swing cycles. The swing is completely free and can be operated at High or Low speed to suit job requirements.

Neutral Brake Swing Mode:
When the crane is working on a slope in Free Swing Mode, it may swing in an unintended direction as soon as the swing parking brake is released. To prevent this, the Neutral Brake Swing Mode reduces operating speeds by lowering the flow of oil in the hydraulic circuit, thus making swing starts and stops easy to control when working on a slope or in windy conditions. Swing speed is also reduced in this mode to prevent the load from moving sideways.

Boom Assembly/Disassembly Mode

The boom assembly/disassembly mode, which is used to release the over-hoist prevention function to facilitate boom assembly and disassembly, is activated with a switch located under the multi-function LCD display of the load moment indicator (LMI). (This switch is different from the switch that releases the auto-stop functions for overload and hook over-hoist.) When the boom is lifted to a certain angle, it is automatically deactivated and the LMI function is automatically re-engaged to ensure that the boom assembly/disassembly function is used only when needed.

Upper Trans-Lifter (Optional)

The upper frame can be mounted onto the lower frame without the use of an assistant crane.

Quick Connection Device (Optional)

Upper frame is attached to or detached from the lower frame using a swift, reliable hydraulic device.

Control Levers Connected Directly to Pilot Valves for Smooth Operation

The control levers regulate the pilot valves directly to reduce the amount of play and ensure smooth, precise hoisting start-ups and inching. Control is light and sure, with almost no clatter even over long operating periods.

Winch Speed Controller

The speeds of the hoist winches and boom hoist can be set independently with trimmer controls.

Hydraulic pilot system detects swing reaction force.

Electric throttle with a twist grip ensures sensitive engine control.

Red switch on the boom lever grip allows easy inching control for hoist, boom hoist, and travel. The operator can activate it without taking his hands off the boom hoist lever.
For better man-machine communication

Excellent Cab with Enhanced Functions

Multi-Function LMI Display

The newly designed load moment indicator (LMI) system features a large, easy-to-read LCD display. The rated load, actual load, load ratio, and other information are displayed in large characters. Warnings and other items are displayed in color, and text messages and alarms alert the operator to prevent dangerous conditions from developing.

Multi Display

The easy-to-read LCD multi display provides information on the current status.

Normal Displays
- Engine speed (Lifting height*1)
- Engine oil change interval
- Reeling number for hoist winch wire rope
- Low-speed switch status
- Wind speed*2

Warning Displays
- Warning (malfunction, maintenance information, etc.)
- Self-diagnostic function (detects malfunctions in solenoid valves, sensors, etc.)

*1 With the optional lifting height gauge installed
*2 With optional anemometer installed

Clear, Panoramic Cabin

The SL6000 has a new cabin design with sash-less front and top glass that provides a panoramic frontward and skylight view. The glass has less curvature to minimize distortion.

Standard equipment
- Air conditioner
- Fully adjustable, high backed seat with a headrest and armrests
- Intermittent wipers and window washers
- Sun visor
- Roof blind
- Luggage tray
- Cup holder

Tilting cab

A tilting device allows the cab to be tilted up to 15° to give the operator a more comfortable working position over long periods of high-rise work.
No compromise in KOBELOCO’s safety policy

Safe, Environmentally-Conscious Design

Two-Stage System to Prevent Boom and Jib Over-Hoists

With primary and secondary over-hoist prevention devices, this new safety system can prevent boom over-hoist at two stages. The primary stop function is activated when the boom or luffing boom approaches the critical angle-to-ground during hoisting. This new system monitors the angle-to-ground the boom, luffing boom or jib with a sensor, and swiftly alerts the operator of danger. For the luffing boom, the angle-to-machine is also monitored at this stage. The secondary stop function uses a device that monitors the angle-to-machine of the boom, luffing boom, or jib through a limit switch fitted to the boom and jib backstops. It stops the machine automatically to prevent it from working outside of the safety range, and once activated it cannot be cancelled.

Automatic Stop Release Switch with Safety Function

The automatic stop system prevents over-load, hook over-hoist and boom over-hoist. To deactivate the system, a two-stage release procedure is employed that uses a master key and separate switches. This makes it easy to supervise the use of the single key and prevent unauthorized release of the automatic stop system.

Other Safety Features

- Function lock lever helps prevent accidental operation when the operator enters or leaves the cab.
- One-way call supports the safety of onsite personnel (Optional).
- External lamp for over-load alarm notifies surrounding workers of the load condition (optional).

Automatic Soft-Stop Function Reduces Shocks

This function is activated automatically when boom or luffing jib lowering, or boom hoisting is stopped by the over-hoist prevention system. It makes for a smooth stop and prevents the load from swinging sideways.
New Base Machine Layout for Easy Maintenance

The new layout eliminates winches on the base machine, providing more space for easier maintenance.

Dust-Resistant Internally Cut Swing Bearing

The standard KOBELCO internally gear swing bearing resists dust penetration and holds grease better than outer-cut bearings.

Auto-Greasers

Auto-greasers are fitted to the side frame of the crawlers to grease the lower rollers.

Super-Fine Filter, a Long-Life Filter for Hydraulic Oil

The large-capacity, super-fine filter is made of a high-performance filter medium consisting of glass fiber reinforced with steel wires. The replacement cycle is extended to four times longer than that of conventional filters to reduce lifelong operating costs.

Conforms with European Exhaust-Gas and Noise Regulations

The SL6000 meets NRMM (Europe) Stage IIIA and US EPA Tier III exhaust emissions regulations, and is designed with advanced KOBELCO low-noise construction technologies to comply with European Noise Regulations.
Main Specifications (Model: SL6000)

### Lift Enhancer
- STD
- HL: 30 m
- SHL: 30 m
- Additional Weight: ~ 250 t

### Heavy Duty Crane Boom
- Max. Lifting Capacity: 450 t, 367.5 t, 550 t
- Length: 6.7 m
- Max. Lifting Capacity: 300 t, 300 t, 300 t
- Length: 9 m
- Max. Combination (Boom): 30 m, 36 m, 36 m
- Length: 36 ~ 42 m

### Crane Boom
- Max. Lifting Capacity: 450 t, 367.5 t, 550 t
- Length: 6.7 m
- Max. Lifting Capacity: 300 t, 300 t, 300 t
- Length: 9 m
- Max. Combination (Boom): 30 m, 36 m, 36 m
- Length: 36 ~ 42 m

### Long Boom
- Max. Lifting Capacity: 450 t, 367.5 t, 550 t
- Length: 6.7 m
- Max. Lifting Capacity: 300 t, 300 t, 300 t
- Length: 9 m
- Max. Combination (Boom): 30 m, 36 m, 36 m
- Length: 36 ~ 42 m

### Heavy Fixed Jib
- Max. Lifting Capacity: 105 t, 120 t, 120 t, 105 t
- Length: 3 m
- Max. Combination (Boom): 78 m, 78 m, 78 m, 102 m
- (Jib): 18 m, 18 m, 18 m, 18 m

### Luffing Jib
- Max. Lifting Capacity: 184 t, 200 t, 200 t
- Length: 3 m
- Max. Combination (Boom): 60 m, 66 m, 84 m
- (Jib): 72 m, 72 m, 84 m
- Luffing Angle: 66 ° ~ 86 °

### Power Plant
- Model: Hino E13C-UV
- Engine Output: 320 kW/2,000 min⁻¹ (rpm)
- Fuel Tank Capacity: 600 liters

### Hoist Winch (H1,H2)
- Max. Line Speed: 110 m/min (1st layer)
- Rated Line Pull (Single line): 137 kN (14.0 tf)
- Wire Rope Diameter: 28 mm
- Wire Rope Length: 830 m

### Working Speed
- Swing: 0.9 min⁻¹ (rpm)
- Travel: 1.0/0.6 km/h

### Hydraulic System
- Pumps: 6 variable displacement
- Max. Pressure: 31.9 MPa (325 kgf/cm²)
- Hydraulic Tank Capacity: 710 liters

### Weight
- Operating Weight: Approx. 424 t
- Ground Pressure: 136 kPa (1.4 kgf/cm²)
- Counterweight: 180.0 t (Upper) + 50.0 t (Lower)

---

### General Dimensions (Unit: mm)

Note: This catalog may contain photographs of machines with specifications, attachments and optional equipment not certified for operation in your country. Please consult KOBELCO for those items you may require. Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

Copyright by KOBELCO CRANES CO., LTD. No part of this catalog may be reproduced in any manner without notice.

KOBELCO CRANES CO., LTD.
17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN
Tel: +81-3-5789-2130 Fax: +81-3-5789-3372
URL: http://www.kobelco-cranes.com/

* KOBELCO is the corporate mark used by Kobe Steel on a variety of products and in the names of a number of Kobe Steel Group companies.

* Without quick connection device.

---

KOBELCO CRANES CO., LTD.
17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN
Tel: +81-3-5789-2130 Fax: +81-3-5789-3372
URL: http://www.kobelco-cranes.com/